

**Amendments to the Claims:**

1. (Currently Amended) A composition for protecting brain cells from excitotoxicity or improving memory of a patient suffering from memory loss; said composition consisting essentially of ~~comprising~~:
  - an extract of Liriopsis tuber from about 5.0 to 500mg, wherein said Liriopsis tuber is selected from the group consisting of *Liriope platyphylla*, *Ophiopogon japonicus*, *Ophiopogon stolonifer*, *Mondo japonicum*, and *Liriope spicata*;
  - ~~at least one pharmaceutically acceptable carrier, said pharmaceutically acceptable carrier is talc; from about 0.5 to 5.0mg, and~~
  - ~~lactose from about 50 to 500mg; and~~
  - magnesium stearate.
  - ~~brown rice, job's tear, barley, glutinous rice, perilla japonica, black bean, black sesame, ganoderma lucidum (FR) karst, and rehmannia glutinosa.~~
2. (Currently Amended) The composition of Claim 1, wherein the amount of talc is about 0.5 to 5.0mg, the amount of lactose is about 50 to 500mg, and the amount of magnesium stearate is about 0.1 to 1.0mg ~~further comprising magnesium stearate from 0.1 to 1.0mg.~~
3. (Withdrawn) The composition of Claim 1, wherein the extract of Liriopsis tuber is obtained by extracting with a solvent selected from the group consisting of C1-4 lower alcohols or a mixture of said lower alcohols and water, acetone, chloroform, methylene chloride, ether and ethyl acetate.
4. (Withdrawn) The composition of Claim 3, wherein the extract of Liriopsis tuber is obtained by dissolving the solvent soluble fraction obtained as described in Claim 3 in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, and further fractionating via extraction with an equal amount of chloroform.
5. (Currently Amended) The composition of Claim 1 [[3]], wherein the extract of Liriopsis tuber is obtained by extracting in a solvent of C1-4 lower alcohol, dissolving the solvent soluble fraction ~~obtained as described in Claim 3~~ in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, further extracting with an equal amount of chloroform, adjusting pH value of the chloroform insoluble fraction with

ammonium hydroxide to a range of 9-12, extracting the chloroform insoluble fraction with an equal amount of chloroform-methanol mixture, further extracting the chloroform-methanol insoluble fraction with methanol, fractionating, thereby obtaining the extract of Liriopsis tuber from the methanol soluble fraction.

6. (Withdrawn) The composition of Claim 3, wherein the extract of Liriopsis tuber is obtained by dissolving the solvent soluble fraction obtained as described in Claim 3 in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, further extracting with an equal amount of chloroform, adjusting pH value of the chloroform insoluble fraction with an equal amount of chloroform-methanol mixture, further extracting the chloroform-methanol insoluble fraction with methanol, fractionating, thereby obtaining the extract of Liriopsis tuber from the methanol insoluble fraction.

7. (Withdrawn) The composition of Claim 1, wherein said composition further comprises an additive selected from the group consisting of natural carbohydrates, flavors, nutrients, vitamins, mineral (electrolytes), synthetic seasonings natural seasonings, coloring agents, fillers, pectic acid and its salt, alginic acid and its salt, organic acids, protective colloidal thickeners, pH regulating agents, stabilizers, preservatives, antioxidants, glycerin, alcohols, carbonizing agents, and sarcocarp.

8. (Currently Amended) The composition of Claim 1, wherein the composition is formulated into an ~~administration form selected from the group consisting of an oral administration, topical applications, suppositories, and sterile injections.~~

9-47 (Cancelled)

48. (Withdrawn) The composition of Claim 7 further comprising a beverage, and wherein the content of the extract of Liriopsis tuber 1-30g per 100ml of said beverage.

49. (Withdrawn) The composition of Claim 7 further comprising a food product, and wherein the content of the extract of Liriopsis tuber is 0.1 to 15% by weight based on the total weight of said food product.

50. (Previously Presented) The composition of Claim 1, wherein said extract of Liriopsis tuber is 3 w/w% by weight based on the total weight of said composition (w/w%), and said brown rice is 30 w/w%, job's tear is 15 w/w%, barley is 20 w/w%, glutinous rice is

9 w/w%, perilla japonica is 7 w/w%, black bean is 8 w/w%, black sesame is 7 w/w%, ganoderma lucidum (FR) karst is 0.5 w/w%, and rehmannia glutinosa is 0.5 w/w%.

51. (Withdrawn) The composition of Claim 3, wherein said carrier is about 500.0mg of lactose, about 5.0mg of talc, and about 1.0mg of magnesium stearate, and wherein said Liriopsis tuber extract is about 500.0mg.

52. (Withdrawn) The composition of Claim 4, wherein said carrier is about 50.0mg of lactose, about 0.5mg of talc, and about 0.1mg of magnesium stearate, and wherein said Liriopsis tuber extract is about 50.0mg.

53. (Currently Amended) The composition of Claim 5, wherein ~~said carrier~~ the amount of lactose is about 50.0mg ~~of lactose~~, the amount of talc is about 0.5mg ~~of tale~~, and the amount of magnesium stearate is about 0.1mg ~~of magnesium stearate~~, and ~~wherein said~~ the amount of Liriopsis tuber extract is about 50.0mg.

54. (Withdrawn) The composition of Claim 6, wherein said carrier is about 50.0mg of lactose, about 0.5mg of talc, and about 0.1mg of magnesium stearate, and wherein said Liriopsis tuber extract is about 50.0mg.

55. (Withdrawn) A composition for protecting brain cells or improving memory; said composition comprising:

an extract of Liriopsis tuber from about 50 to 500mg; and

at least one pharmaceutically acceptable carrier, said pharmaceutically acceptable carrier is starch from about 1.0 to 10mg and magnesium stearate from about 10 to 100mg.

56. (Withdrawn) The composition of Claim 55, wherein said extract of Liriopsis tuber is obtained by extracting with a solvent selected from the group consisting of C1-4 lower alcohols or a mixture of said lower alcohols and water, acetone, chloroform, methylene chloride, ether and ethyl acetate, and said carrier is about 10.0mg of starch, and about 100.0mg of magnesium stearate, and wherein said Liriopsis tuber extract is about 500.0mg.

57. (Withdrawn) The composition of Claim 55, wherein said extract of Liriopsis tuber is obtained by dissolving the solvent soluble fraction obtained as described in Claim 3 in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, and further fractionating via extraction with an equal amount of chloroform,

and said carrier is about 1.0mg of starch, and about 10.0mg of magnesium stearate, and wherein said Liriopsis tuber extract is about 50.0mg.

58. (Withdrawn) The composition of Claim 55, wherein said extract of Liriopsis tuber is obtained by dissolving the solvent soluble fraction obtained as described in Claim 3 in a mixed solvent of Cl-4 lower alcohol and water, adjusting to pH value with an acid to a range of 2-4, further extracting with an equal amount of chloroform, adjusting pH value of the chloroform insoluble fraction with ammonium hydroxide to a range of 9-12, extracting the chloroform insoluble fraction with an equal amount of chloroform-methanol mixture, further extracting the chloroform-methanol insoluble fraction with methanol, fractionating, thereby obtaining the extract of Liriopsis tuber from the methanol soluble fraction, and said carrier is about 1.0mg of starch, and about 10.0mg of magnesium stearate, and wherein said Liriopsis tuber extract is about 50.0mg.

59. (Withdrawn) The composition of Claim 55, wherein aid extract of Liriopsis tuber is obtained by dissolving the solvent soluble fraction obtained as described in Claim 3 in a mixed solvent of Cl-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, further extracting with an equal amount of chloroform, adjusting pH value of the chloroform insoluble fraction with an equal amount of chloroform-methanol mixture, further extracting the chloroform-methanol insoluble fraction with methanol, fractionating, thereby obtaining the extract of Liriopsis tuber from the methanol insoluble fraction, and said carrier is about 1.0mg of starch, and about 10.0mg of magnesium stearate, and wherein said Liriopsis tuber extract is about 50.0mg.

60. (Withdrawn) A composition for protecting brain cells or improving memory; said composition comprising:

an extract of Liriopsis tuber from about 5.0 to 50mg; and

at least one pharmaceutically acceptable carrier, said pharmaceutically acceptable carrier is about 95.1g of sugar, about 80mg of Paraoxybenzoate, about 16mg Paraoxypropylbenzoate, and about 150ml of purified water.

61. (Withdrawn) The composition of Claim 60, wherein said extract of Liriopsis tuber is obtained by extracting with a solvent selected from the group consisting of Cl-4

lower alcohols or a mixture of said lower alcohols and water, acetone, chloroform, methylene chloride, ether and ethyl acetate, and said Liriopsis tuber extract is about 5.0g.

62. (Withdrawn) The composition of Claim 60, wherein said extract of Liriopsis tuber is obtained by dissolving the solvent soluble fraction obtained as described in Claim 3 in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, and further fractionating via extraction with an equal amount of chloroform, and said Liriopsis tuber extract is about 50.0mg.

63. (Withdrawn) The composition of Claim 60, wherein said extract of Liriopsis tuber is obtained by dissolving the solvent soluble fraction obtained as described in Claim 3 in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, further extracting with an equal amount of chloroform, adjusting pH value of the chloroform insoluble fraction with an equal amount of chloroform-methanol mixture, further extracting the chloroform-methanol insoluble fraction with methanol, fractionating, thereby obtaining the extract of Liriopsis tuber from the methanol soluble fraction, and said Liriopsis tuber extract is about 50.0mg.

64. (Withdrawn) The composition of Claim 60, wherein said extract of Liriopsis tuber is obtained by dissolving the solvent soluble fraction obtained as described in Claim 3 in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, further extracting with an equal amount of chloroform, adjusting pH value of the chloroform insoluble fraction with ammonium hydroxide to a range of 9-12, extracting the chloroform insoluble fraction with an equal amount of chloroform-methanol mixture, further extracting the chloroform-methanol insoluble fraction with methanol, fractionating, thereby obtaining the extract of Liriopsis tuber from the methanol insoluble fraction, and said Liriopsis tuber extract is about 50.0mg.

65. (Withdrawn) A composition for protecting brain cells or improving memory; said composition comprising:

an extract of Liriopsis tuber from about 50 to 500mg; and

at least one pharmaceutically acceptable carrier, said pharmaceutically acceptable carrier is about 20g of isomerized sugar, 5.0mg of antioxidant, 2.0mg of methylparaoxybenzoate, and about 100ml of purified water.

66. (Withdrawn) The composition of Claim 65, wherein said extract of *Liriopsis* tuber is obtained by extracting with a solvent selected from the group consisting of C1-4 lower alcohols or a mixture of said lower alcohols and water, acetone, chloroform, methylene chloride, ether and ethyl acetate, and said *Liriopsis* tuber extract is about 500.0mg.

67. (Withdrawn) The composition of Claim 65, wherein said extract of *Liriopsis* tuber is obtained by dissolving the solvent soluble fraction obtained as described in Claim 3 in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, and further fractionating via extraction with an equal amount of chloroform, and said *Liriopsis* tuber extract is about 500.0mg.

68. (Withdrawn) The composition of Claim 65, wherein said extract of *Liriopsis* tuber is obtained by dissolving the solvent soluble fraction obtained as described in Claim 3 in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, further extracting with an equal amount of chloroform, adjusting pH value of the chloroform insoluble fraction with ammonium hydroxide to a range of 9-12, extracting the chloroform insoluble fraction with an equal amount of chloroform-methanol mixture, further extracting the chloroform-methanol insoluble fraction with methanol, fractionating, thereby obtaining the extract of *Liriopsis* tuber from the methanol soluble fraction, and said *Liriopsis* tuber extract is about 500.0mg.

69. (Withdrawn) The composition of Claim 65, wherein said extract of *Liriopsis* tuber is obtained by dissolving the solvent soluble fraction obtained as described in Claim 3 in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, further extracting with an equal amount of chloroform, adjusting pH value of the chloroform insoluble fraction with ammonium hydroxide to a range of 9-12, extracting the chloroform insoluble fraction with an equal amount of chloroform-methanol mixture, further extracting the chloroform-methanol insoluble fraction with methanol, fractionating, thereby obtaining the extract of *Liriopsis* tuber from the methanol insoluble fraction, and said *Liriopsis* tuber extract is about 500.0mg.

70. (Withdrawn) A composition for protecting brain cells or improving memory; said composition comprising:

an extract of *Liriopsis* tuber from about 5.0 to 50mg; and

at least one pharmaceutically acceptable carrier, said pharmaceutically acceptable carrier is about 1.0mg of antioxidant, 1.0mg of Tween 80, and 2.0ml of distilled water.

71. (Withdrawn) The composition of Claim 70, wherein said extract of *Liriopsis* tuber is obtained by extracting with a solvent selected from the group consisting of C1-4 lower alcohols or a mixture of said lower alcohols and water, acetone, chloroform, methylene chloride, ether and ethyl acetate, and said *Liriopsis* tuber extract is about 50.0mg.

72. (Withdrawn) The composition of Claim 70, wherein said extract of *Liriopsis* tuber is obtained by dissolving the solvent soluble fraction obtained as described in Claim 3 in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, and further fractionating via extraction with an equal amount of chloroform, and said *Liriopsis* tuber extract is about 50.0mg.

73. (Withdrawn) The composition of Claim 70, wherein said extract of *Liriopsis* tuber is obtained by dissolving the solvent soluble fraction obtained as described in Claim 3 in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, further extracting with an equal amount of chloroform, adjusting pH value of the chloroform insoluble fraction with ammonium hydroxide to a range of 9-12, extracting the chloroform insoluble fraction with an equal amount of chloroform-methanol mixture, further extracting the chloroform-methanol insoluble fraction with methanol, fractionating, thereby obtaining the extract of *Liriopsis* tuber from the methanol soluble fraction, and said *Liriopsis* tuber extract is about 50.0mg.

74. (Withdrawn) The composition of Claim 70, wherein said extract of *Liriopsis* tuber is obtained by dissolving the solvent soluble fraction obtained as described in Claim 3 in a mixed solvent of C1-4 lower alcohol and water, adjusting pH value with an acid to a range of 2-4, further extracting with an equal amount of chloroform, adjusting pH value of the chloroform insoluble fraction with ammonium hydroxide to a range of 9-12, extracting the chloroform insoluble fraction with an equal amount of chloroform-methanol mixture, further extracting the chloroform-methanol insoluble fraction with methanol, fractionating, thereby obtaining the extract of *Liriopsis* tuber from the methanol insoluble fraction, and said *Liriopsis* tuber extract is about 50.0mg.

75. (Withdrawn) A method for protecting brain cells against damage caused by excitatory amino acids and oxidative stress in a mammal comprising administering to said mammal a therapeutic amount of an extract of *Liriopsis tuber* of Claim 3, wherein said extract of *Liriopsis tuber* is administered in an amount of from 0.1mg/kg to 500mg/kg, and wherein said extract is administered to said mammal via a route selected from the group consisting of oral administration, topical application, sterile injection, inhalation, beverage, food product, and rectal administration.

76. (Withdrawn) A method for inhibiting AMPA-induced depolarization of a neuronal cell of a mammal comprising administering to said mammal a therapeutic amount of an extract of *Liriopsis tuber* of Claim 3, wherein said extract of *Liriopsis tuber* is administered in an amount of from 0.1mg/kg to 500mg/kg and wherein said extract is administered to said mammal via a route selected from the group consisting of oral administration, topical application, sterile injection, inhalation, beverage, food product, and rectal administration.

77. (Withdrawn) A method of facilitating tyrosine phosphorylation of a hippocampal protein of a mammal comprising administering to said mammal a therapeutic amount of an extract of *Liriopsis tuber* of Claim 3, wherein said extract of *Liriopsis tuber* is administered in an amount of from 0.1mg/kg to 500mg/kg and wherein said extract is administered to said mammal via a route selected from the group consisting of oral administration, topical application, sterile injection, inhalation, beverage, food product, and rectal administration.

78. (Withdrawn) The method of Claim 77, wherein said hippocampal protein comprises an insulin receptor.

79. (Withdrawn) The method as of Claim 77, wherein said hippocampal protein comprises ERKs (Extracellular-signal Regulated Kinases).

80. (Withdrawn) A method of inhibiting cholinesterase activity in the brain of a mammal comprising administering to a said mammal a therapeutic amount of an extract of *Liriopsis tuber* of Claim 3, wherein said extract of *Liriopsis tuber* is administered in an amount of from 0.1mg/kg to 500mg/kg and wherein said extract is administered to said



Application No.: 10/509,150

Response to Office Action of May 3, 2007

Attorney Docket: SJKIM-009US (formerly AP036-04)

mammal via a route selected from the group consisting of oral administration, topical application, sterile injection, inhalation, beverage, food product, and rectal administration.

81. (Withdrawn) A method of treating neurodegenerative diseases of a mammal comprising administering a medicament to said mammal, wherein said medicament prepared with an extract of *Liriopsis* tuber of Claim 3.

82. (Withdrawn) A method of preventing or treating dementia of a mammal comprising administering a medicament to said mammal, wherein said medicament prepared with an extract of *Liriopsis* tuber of Claim 3.

83. (Withdrawn) A method of improving memory of a mammal comprising administering a medicament to said mammal, wherein said medicament prepared with an extract of *Liriopsis* tuber of Claim 3.